



IAEA

International Atomic Energy Agency

Atoms for Peace

Training Workshop on Ion Beam Analysis Techniques

**Ruđer Bošković Institute
Zagreb, Croatia**

23 – 27 April 2018

Ref. No.: EVT1701650

Information Sheet

A. BACKGROUND

Over the last 20 years, the International Atomic Energy Agency's (IAEA's) Nuclear Science and Instrumentation Laboratory (NSIL) has played a leading role worldwide in the effective use of nuclear instrumentation and nuclear spectrometry techniques, including the development of X-ray fluorescence techniques and portable systems and analytical methodologies for in situ radiological and materials characterization in Member States' priority areas, such as on-site environmental assessment, mineral prospecting and the study of cultural heritage objects. The NSIL also operates a beam line at the Ruđer Bošković Institute (Zagreb, Croatia) and an ultra-high vacuum end station at the Elettra synchrotron facility (Trieste, Italy), and facilitates the access of IAEA Member States' investigators to such facilities for experimental work and adaptive research. In addition to these research activities, the NSIL has supported IAEA technical cooperation projects by providing training in nuclear instrumentation to hundreds of fellows and scientific visitors. The NSIL has extensive experience in providing training on, and recommendations for, the implementation of nuclear spectrometry techniques.

B. OBJECTIVES

The purpose of the workshop is to develop the capabilities and skills of scientist and technicians from Member States that plan to commission or have recently commissioned particle accelerators, as well as from Member States that do not have ion beam laboratories but would like to conduct experiments at low to medium energy accelerators. The workshop will help to share knowledge on approaches for conducting ion beam analysis experiments with a range of X-ray, gamma ray and particle based detection techniques, and to nurture and further develop the community and network of scientists and technicians utilizing accelerator based ion beam techniques.

The following topics are expected to be included in the programme:

- Particle accelerators and the main features of their performance;
- Ion beam analysis (IBA) techniques, including particle induced X-ray emission, Rutherford backscattering spectrometry, particle induced gamma ray emission and elastic recoil detection analysis;
- Internal and external quality control activities;
- Addressing current needs of IAEA Member States for introducing and extending the use of IBA techniques; and
- The role of the IAEA in supporting the activities undertaken by developing Member States to achieve effective introduction of IBA techniques.

C. WORKSHOP FORMAT

Participants should submit an abstract describing their interest in the topics of the workshop and the country needs along with their nomination.

The workshop will consist of lectures and practical demonstrations. Participants are encouraged to prepare a presentation describing their needs in the field of relevance of the workshop and encouraged to engage in discussions on possible projects involving the use of IBA techniques.

The official language of the workshop is English. No interpretation will be provided. It is expected that the workshop will start at 09:00 on Monday, 23 April 2018 and conclude by 16:00 on Friday, 27 April 2018.

The outputs of discussions will be recorded for possible dissemination to Member States as an IAEA technical publication.

D. ADMINISTRATIVE AND FINANCIAL ARRANGEMENTS

The selected candidates will in due course be sent full details of the procedures to be followed with regard to administrative and financial matters.

No registration fee is charged to participants. The costs of the workshop facilities and of logistic support will be borne by the IAEA.

As a general rule, the IAEA does not pay the costs for attendance at the workshop. However, limited funds may be made available to assist the attendance of selected participants and approved in accordance with the current IAEA rules and regulations. Travel and subsistence expenses of participants may be borne by the IAEA utilizing the limited funds that are available to help cover the cost of certain participants. Such assistance can be offered upon specific request to normally one participant per country provided that, in the IAEA's view, the participant on whose behalf assistance is requested will make an important contribution to the workshop. The application for financial support should be made at the time of nominating the participant. If Governments wish to apply for financial support on behalf of their nominees, they should address specific requests using the attached Grant Application Form (Form C) to the IAEA Scientific Secretary.

It should be noted that compensation is not payable by the IAEA for any damage to or loss of personal property. The IAEA also does not provide health insurance coverage for participants in meetings, workshops or training courses or for consultants. Arrangements for private insurance coverage on an individual basis should therefore be made. The IAEA will, however, provide insurance coverage for accidents and illnesses that clearly result from any work performed for the IAEA.

E. REGISTRATION AND PARTICIPATION

The workshop may be attended only upon official nomination. Participants should complete the attached Participation Form (Form A) and send it to the appropriate national authority (Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority) for subsequent transmission to the IAEA, not later than **16 February 2018**. Nominations received after that date or applications sent directly by individuals or by private institutions cannot be considered. Nominating Governments will be informed in due course of the names of the selected candidates and at that time full details will be given on the procedures to be followed with regard to administrative and financial matters. For Member States receiving technical cooperation assistance, applications for financial support should be made at the time of nomination the participant.

The workshop will be of interest to professionals willing to access ion beam analysis techniques or who have been designated by their national authorities to provide an assessment of their country's needs in these fields. Individuals wishing to be considered for participation are expected to submit a short abstract covering their work relevant to the objectives of the workshop.

F. LOCAL ARRANGEMENTS

It is the responsibility of all participants to make their own travel arrangements to/from Croatia. Detailed information on accommodation, local transport to/from the workshop venue, and other organisational details, will be sent to all designated participants well in advance of the workshop.

G. VISAS

Participants who require a visa to enter Croatia should submit the necessary application to the nearest diplomatic or consular representative of Croatia well in advance of entry. An official letter of invitation will be issued to all participants by the IAEA Scientific Secretary.

H. DEADLINES AND KEY DATES

- **16 February 2018:** Submission of abstracts and requests to the IAEA for participation and financial support.
- **23 February 2018:** Participants are informed of the acceptance of their nominations and of their requests for financial support.

I. ORGANIZATION

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